

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

November 2, 1881.—R. Etheridge, Esq., F.R.S.,
President, in the Chair.

The following communication was read :—

“On the Genus *Stoliczkania*, Dunc., and its Distinctness from *Parkeria*, Carp. and Brady.” By Prof. P. Martin Duncan, M.B. Lond., F.R.S., F.G.S., Pres. R.M.S.

The author discussed in detail the characters of his Syringosphaeridae, a group of Rhizopoda established by him for the reception of the spheroidal organisms known in India as Karakoram stones.

The order Syringosphaeridae consists of spherical or spheroidal bodies composed of numbers of conical radiating congeries of minute, continuous, long, bifurcating and imbricating tubes, and of an interradial tube-reticulation arising from and surrounding the radial congeries. The tubes open at the surface in eminences and in pores. The walls of the tubes consist of granular and subspiculate carbonate of lime. There is no cœnenchyma. In *Syringosphaeria* (fully characterized by the author in ‘Scientific Results of the Yarkand Mission,’ Calcutta, 1879 p. 10), the body is covered with large compound wart-like prominences with intermediate verrucosities, or with modifications of such structures; and between these eminences are shallow depressions bounded by tubes. The surface has tubes opening upon it from the internal radial series and also from the interradsial reticulation; there are also masses of tubes running over it and converging on the eminences. In *Stoliczkania*, a second genus, the surface is covered by numerous granulations, separated by intervals about equal to their breadth. There are no pores on the surface: but tube-openings occur in the granulations. The central ones, which are small, are the terminations of the very numerous radial series, which, in section, are not very conical but nearly straight; and give off minute offshoots to the surrounding convoluted and varicose larger tubes of the interradsial series, which open towards the periphery of the granulations. There is no cœnenchyma. The species is named *Stoliczkania granulata*.

The author compared the structure of the Syringosphaeridae with that of *Parkeria*, to which they have a considerable resemblance in external appearance. The internal structure differs. *Parkeria* shows a radial series of large tubes, a system of interspaces in concentric series, and a labyrinthine structure of irregularly-shaped chamberlets, communicating with each other and cancellous in appearance. The interspaces are traversed by one or more large radial tubes; and the floor of each interspace towards the centre is made up of the minute chamberlet structure, the openings of which communicate only with the interspace beyond. The labyrinthine structure sometimes stretches across the interspaces,

and the radial tubes communicate at their sides with the labyrinthic chamberlets of the lamellæ forming the floor and roof of the inter-spaces. The continuity from the centre of the body to the circumference is thus defective, and the body consists of radial tubes and of a labyrinthic structure of a cellular and semicellular character.

The author maintained that the two structures were intrinsically different; and he also indicated a difference in the mineral condition of the fossils, *Parkeria* being always phosphatic, whereas no phosphate of lime could be detected in *Stoliczkania*.

November 16, 1881.—R. Etheridge, Esq., F.R.S.,
President, in the Chair.

The following communications were read:—

1. “Additional Evidence on the Land Plants from the Pen-y-glog Slate-quarry, near Corwen.” By Henry Hicks, Esq., M.D., F.G.S.

The author stated that since the date of his former paper (Quart. Journ. Geol. Soc., August 1881) he had ascertained that plant-remains occurred in the slaty beds down to the base of the quarry, though much obscured by cleavage. The larger specimens are in the form of anthracite. Mr. Carruthers states that there is sufficient evidence to show that they are the remains of vascular plants with some resemblance to the Lycopodiaceæ. Some of the fragments are from 4 to 5 inches wide, and the author had traced trunks some feet in length. He thought they had drifted to the position where they were now found. Leaf-markings generally are not preserved; but, from the wrinklins still remaining on some specimens, he thought it probable they had been covered with leaves spirally arranged. Some fragments show scars arranged irregularly on the surface; probably these are fragments of roots. The plant seems to some extent to combine the characters of *Stigmara*, *Sigillaria*, and *Lepidodendron*. Further details of the appearance of the specimens were given. For one which appears to differ from all hitherto described he proposes the name of *Berwynia Carruthersii*.

2. “Notes on *Prototaxites* and *Pachytheca* from the Denbighshire Grits of Corwen, North Wales.” By Principal Dawson, LL.D., F.R.S., F.G.S.

The author stated that he had obtained specimens of the Plant-remains from near Corwen, and that among them there were two kinds, one dark, the other light-coloured. In the former the long cells and woody fibres are filled with rods of transparent siliceous matter, and the walls represented by a thick layer of carbon. The lighter kind consists of the siliceous rods alone, which are thus in the same state as the asbestos-like silicified Coniferous wood of the Californian gold-gravels. In both the siliceous rods show traces of the irregularly spiral ligneous lining of the cell-walls. From these and other characters the author refers the specimens to his genus *Prototaxites*,

which, he says, is not an Alga, but a woody terrestrial plant. The author did not state that *Prototaxites* actually belonged to the Taxineæ, but that its fossilized wood showed a resemblance to that of some fossil Taxineæ. The remains discovered by Dr. Hicks differ, as already recognized by Mr. Etheridge, from *Prototaxites Loganii*, Daws.; and the species may be named *P. Hicksii*.

Of *Pachythea* the author stated that he had specimens from the Upper Silurian of New Brunswick, and these and the Welsh specimens seem to belong to the genus *Ætheotesta*, Brongn., and to be nearly allied to *Æ. devonica*, Daws., from the Devonian of Scotland. These fossils occur associated with *Prototaxites*, not only at Corwen, but in the Upper Ludlow of England, in the Upper Silurian of Cape Bon Ami, and in the Lower Devonian of Bordeaux quarry opposite Campbellton in New Brunswick; and as the author maintains *Ætheotesta* to be a seed, and Brongniart compared it with the seeds of the Taxineæ, this may be taken as additional evidence in favour of the Taxine or, at any rate, Gymnospermatous nature of *Prototaxites*.

December 7, 1881.—R. Etheridge, Esq., F.R.S.,
President, in the Chair.

The following communications were read:—

1. “On some new or little-known Jurassic Crinoids.” By P. Herbert Carpenter, Esq., M.A. Communicated by Prof. P. Martin Duncan, M.B. Lond., F.R.S., F.G.S.

The author first described in detail a species from the Great Oolite, principally of Lansdown, and hence known as the “Lansdown Emericite.” It was described in 1828 by Dr. J. E. Gray as *Emericites (Apicrinites) Prattii*, and subsequently by Goldfuss as *Apicrinites obconicus*, and by D’Orbigny as *Millericrinus obconicus*, whilst Bronn, in 1848, recorded it as *Millericrinus Prattii*. The stem varies greatly in length and in the number of its joints; and from the characters presented by the fossils the author came to the conclusion that the species was either pedunculate or free; and he cited various examples of nearly allied pedunculate and free Crinoids. The general aspect of the calyx, the component plates of which were described in detail, is exceedingly pentaerinoïd, whether it is viewed from the side or from above; and the arm-joints are short and nearly oblong in outline, having pinnules alternately upon opposite sides. The nearest allies of *Millericrinus Prattii* are *M. Nodotianus*, d’Orb., and the var. *Buchianus* of *M. Munsterianus*; and of *Pentaerini* the one which most resembles it in the characters of the calyx is the North-Atlantic *P. Wyrville-Thomsoni*.

The remainder of the paper was devoted to the description of two Jurassic Comatulæ, namely *Antedon calloviensis*, from the Kelloway Rock, described before the Society on June 22, 1881, and a new species, *Antedon latiradia*, from the Great Oolite of Bradford.

2. "Notes on the Polyzoa of the Wenlock Shales, Wenlock Limestone, and Shales over the Wenlock Limestone. From material supplied by G. Maw, Esq., F.L.S., F.G.S." By G. R. Vine, Esq. Communicated by Dr. H. C. Sorby, F.R.S., V.P.G.S.

The author has received from Mr. Maw about $1\frac{1}{2}$ hundredweight of materials washed out of the Wenlock deposits of Shropshire, representing the contents of from 6 to 8 tons of unwashed material. From this material he extracted the specimens of Plants, Actinozoa, Echinodermata, Crustacea, and Polyzoa; and he gave a tabular synopsis of the species and their distribution, with the addition of types from the Wenlock Limestone and of the species of Brachiopoda referred to in a paper by Messrs. Maw and Davidson in the 'Geological Magazine' for 1881.

With regard to the Polyzoa, the author remarked that below the Cretaceous series the two great divisions of Chilostomata and Cyclostomata do not hold good, and suggested that the classification of Palæozoic Polyzoa should be based on the arrangement and character of the cells, in combination with habit. The forms characterized in the present paper were *Stomatopora dissimilis*, Vine, and vars. *elongata* and *compressa*, *Ascodictyon stellatum*, Nich. & Eth., *A. radiceforme*, sp. n., *A. filiforme*, sp. n.?, *Spiropora regularis*, sp. n., *S. intermedia*, Vine, *Diastopora consimilis*, Lonsd., *Ceriopora*, Goldf., *Hornera crassa*, Lonsd., *H.?* *delicatula*, sp. n., *Polypora?* *problematica*, sp. n., *Fenestella prisca*, Lonsd., *Glaucanome disticha*, Goldf., *Ptilodictya lanceolata*, Lonsd., *P. Lonsdalei*, sp. n., (= *P. lanceolata* auctt.), *P. scalpellum*, Lonsd., *P. interporosa*, Vine, and *P. minuta*, Vine.

MISCELLANEOUS.

On the Postembryonic Development of the Diptera.

By M. H. VIALLANES.

AMONG insects, it is in the Muscidae that we observe the greatest differences between the larva and the perfect animal; and it is also in them that the metamorphoses that take place during the pupal period are the most profound, which explains why exact investigations upon the metamorphoses of insects have been directed principally to these insects or to nearly allied animals. Having repeated the work of my predecessors*, I have been able to discover some new facts, of which I now have the honour to place a summary report before the Academy.

When the larva becomes motionless and transformed into a pupa, not only does the skin of the segments answering to the head and

* My investigations were made in M. Milne-Edwards's laboratory; they relate to *Musca vomitoria*.